

What is Claimed Is:

1. An optical fiber gripping device, comprising:
a sheet of material having first and second members hingedly attached at a first end of each of the members; and
5 a gripping region that includes first and second gripping portions disposed on first and second inner portions of each of said members, respectively to apply a substantially even distribution of force to an outer perimeter of an optical fiber disposed in said gripping region.
2. The device of claim 1, wherein the gripping portion comprises a substantially
10 malleable material.
3. The device of claim 1, wherein said gripping region is pre-grooved.
4. The device of claim 1, wherein each of said gripping portions comprises a semicircular shape.
5. The device of claim 1, wherein when said gripping region is in an open
15 position, passage of an optical fiber is provided, and wherein when said gripping region is in an engaged position, each of said gripping portions is disposed on an outer diameter of said optical fiber.
6. The device of claim 5, wherein said outer diameter is from about 120 μm to about 130 μm .
- 20 7. The device of claim 5, wherein said outer diameter is from about 240 μm to about 260 μm .
8. The device of claim 5, wherein said outer diameter is about 900 μm or larger.
9. The device of claim 1, wherein when said gripping region is in an engaged position, the gripping portions contact about 260 degrees to about 360 degrees of a
25 perimeter of the fiber.

10. The device of claim 1, wherein the optical fiber comprises a glass core, a glass cladding, and a polymer-based coating affixed to said cladding.
11. The device of claim 1, wherein the optical fiber has a protective coating that is softer than the material of the gripping portions.
- 5 12. The device of claim 1, wherein the sheet of material further comprises at least one slot to define separate clamping zones along a length of said gripping region.
13. The device of claim 1, wherein said gripping region is adapted to grip two optical fibers, wherein at least one of the fibers being gripped comprises a protective layer that is softer than the material of the gripping portions.
- 10 14. The optical fiber gripping device of claim 1, wherein said optical fiber gripping device is disposed in a splice device.
15. The optical fiber gripping device of claim 1, wherein said optical fiber gripping device is disposed in a connector.
16. The optical fiber gripping device of claim 1, wherein said optical fiber gripping
15 device is disposed in a remateable connector.
17. An optical fiber splice, comprising:
a first optical fiber having a first end;
a second optical fiber having a second end; and
a housing to support the first and second ends in contact, wherein said housing
20 applies a substantially even distribution of force to an outer perimeter of at least a portion of the first and second optical fibers.
18. The optical fiber splice of claim 17, wherein said housing comprises:
an optical fiber gripping device that includes first and second members
hingedly attached at a first end of each of the members; and

a gripping region that includes first and second gripping portions disposed on first and second inner portions of each of said members, respectively to apply said substantially even distribution of force to the outer perimeter of the portions of the first and second optical fibers disposed in said gripping region.

5 19. The device of claim 18, wherein said gripping region is pre-grooved.

20. The device of claim 18, wherein each of said gripping portions comprises a semicircular shape.

21. The optical fiber splice of claim 17, wherein the first fiber further a glass core, a glass cladding layer, and a protective coating affixed to the cladding layer.

10 22. The optical fiber splice of claim 21, wherein the protective coating is a polymer-based coating.

23. The optical fiber splice of claim 17, wherein at least on fiber is a plastic optical fiber (POF).

24. The optical fiber splice of claim 17, wherein at least one fiber is a TECS fiber.

15 25. The optical fiber splice of claim 17, wherein at least one of the fibers is a glass fiber.

26. A method of making an optical gripping device that applies a substantially even distribution of force to an outer perimeter of first and second optical fibers disposed therein, comprising:

20 providing a predetermined diameter pin, wherein said pin is harder than a material comprising a gripping region of the device;

inserting the pin in said gripping region of the gripping device in a first predetermined position; and

25 closing the device to a second predetermined position to form substantially semicircle shapes in said gripping region.

27. The method of claim 26, wherein said gripping region comprises first and second gripping portions, each having a multi-sided form prior to said closing.